

REMARKS

Claims 1-3, 5-7, 9-19 are pending in the present application. Claims 1, 5, 6, 7 and 9 have been amended. Claims 4 and 8 have been cancelled. New claims 10-19 have been added. The amendments to claims 1, 5, 6 and 9 are supported by the disclosure at page 17, lines 10-25, page 22, line 13 through page 23, line 5 and Examples 1, 4-7 and 9-31. Claim 7 has been amended to more clearly describe the invention. New claim 10 is supported by the disclosure at page 24, lines 24-29. New claims 11-17 are supported by the disclosure at page 22, lines 26-27 and the Examples. New claims 18 and 19 are supported by the disclosure at page 17, lines 17-18. Accordingly, no new matter has been added by way of the above amendments.

Specification

The abstract has been objected for being of undue length. Applicants have amended the abstract to be less than 15 lines in length according to the requirement of MPEP 608.01(b).

Issues under 35 USC § 112

Claims 5-6 and 9 have been rejected under 35 U.S.C. 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. The claims have been amended to recite "A process..." instead of "The process..." Therefore, this rejection has been overcome and should be withdrawn.

Issues under 35 USC § 102

Claim 4 has been rejected under 35 U.S.C. 102(b) as being anticipated by Ishikawa et al. (EP 384480 A2).

Claim 8 has been rejected under 35 U.S.C. 102(b) as being anticipated by Magari et al. (US Patent 4,416,809).

Since claims 4 and 8 have now been cancelled, Applicants request that these rejections be withdrawn.

Issues under 35 USC § 103

Claims 1 and 3-4 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Tano et al. (WO 01/00572) in view of Ishikawa et al. (EP 0 384 480 A2).

Claim 2 has been rejected under 35 U.S.C. 103(a) as being unpatentable over Tano et al. (WO 01/00572) in view of Ishikawa et al. (EP 0 384 480 A2) and further in view of Magari et al. (US 4,416,809).

Claims 5-7 and 9 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Tano et al. (WO 01/00572) in view of Ishikawa et al. (EP 0 384 480 A2) and further in view of Fukutome et al. (JP 2979727).

These rejections are respectfully traversed. Reconsideration and withdrawal thereof are requested.

Applicants' Invention

In the processes of the claimed invention, Applicants have found that controlling the water content of the powder, flakes or pellets produced from the aged paste in process step (3) provides advantageous and unexpected results, especially when the water content in the powder, flakes or pellets is equal to or less than 10 wt%. Additionally, Applicants have discovered improved and unexpected results when, in the second aging step (process step (4)), the temperature of the second aging step is maintained between 25°C and 45°C and the second aging time is equal to or longer than 30 minutes. By adding this second aging step, Applicants discovered that the resulting powder, flakes or pellets used in the detergent exhibited improved properties, such as improved anti-caking under pressure and improved flowability. The Examples set forth in Applicants disclosure further demonstrate this improvement. In this regard, please see Tables 1 and 4 of the specification.

In Table 4, Comparative Examples 2, 3 and 4 were prepared without a second aging step and as a result are shown to exhibit a much higher tendency to cake under pressure when compared to the Examples prepared according to the invention which include a second aging step (e.g. Example 1). In Comparative Example 1, the content of water based on the powder is 15.3% which is outside the claimed limitation of "less than or equal to 10 wt%". As a result, the tendency of Comparative Example 1 to cake is much higher than that observed when the content of water is less than or equal to 10 wt%. In Table 1, Examples 2, 3 and 8 are subjected to a second aging step at 15°C which is outside the scope of 25-45°C as claimed. The resulting

detergent exhibits inferior flowability (angle of repose) than that exhibited by examples of the invention which were subjected to a second aging step at 25-45°C.

Distinction over Tano et al.

Tano discloses a process for producing α -sulfo fatty acid alkyl ester salt powder particles and also discloses an aging step. However, Tano fails to disclose or suggest the paste-aging step according to the invention and further fails to disclose or suggest a second aging step applied to the powder, flakes or pellets which contain 10 wt% or less of water. And while Tano does teach that aging steps can occur at various stages throughout the process, all of the aging processes occur at temperatures of at least 70°C. By contrast, the second aging step of the invention occurs at temperatures between 25 and 45°C

Distinction over Ishikawa et al.

Ishikawa is cited to teach that the powder, flakes or pellets can contain less than 10 wt% of water. However, Ishikawa fails to correct the deficiency of Tano wherein a second aging step occurs at temperatures between 25 and 45°C. Table 1 of Ishikawa shows that the inner wall temperature of the casing was at least 150°C. Therefore, the combination of Tano et al. and Ishikawa et al. fails to teach all of the features of Applicants' claims 1 and 3.

Distinction over Magari et al.

Magari is cited against claim 2 to teach the step of further mixing the powder, flakes or pellets with an inorganic powder having an average particle diameter of 0.1-100 μ m, in an amount of 1-40 wt%. However, Magari fails to correct the above noted deficiency of Tano,

namely that a second aging step is carried out at temperatures between 25 and 45°C. The only heating step taught by Magari occurs at column 5, lines 1-5 where it is taught that spray drying was carried out at temperatures of 200°C and an exhaust air temperature of 100°C. Therefore, the combination of Tano et al., Ishikawa et al. and Magari et al. fails to teach all of the features of Applicants' claim 2.

Distinction over Fukutome et al.

Fukutome is cited to teach that the powder, flakes or pellets can be combined with a detergent component by powder mixing, kneading-crushing or agitation granulation. Fukutome is also cited to teach that the powder, flakes or pellets can be combined with a detergent component and water to give a slurry that is then spray dried. However, Fukutome fails to teach that a second aging step is carried out at temperatures between 25 and 45°C. For example, in the spray drying process described in Fukutome, a hot blast temperature of 200-300°C is employed. Therefore, the combination of Tano et al., Ishikawa et al. and Fukutome et al. fails to teach all of the features of Applicants' claim 2.

Inasmuch as Tano et al. fails to teach Applicants second aging step wherein the second aging temperature is 25-45°C, and since the combination of Tano with any or all of Ishikawa et al, Magari et al. and Fukutome et al. fails to overcome this deficiency, Applicants submit that a case of *prima facie* obviousness has not been established. Accordingly, the rejection of the instant claims over the combination of these references should be withdrawn.

In view of the above amendment, applicant believes the pending application is in condition for allowance.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Gerald M. Murphy, Jr., Reg. No. 28,977 at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.147; particularly, extension of time fees.

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Respectfully submitted,

By 

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